

# **The Regulations for the Heavy-Duty Smoke Inspection Program and Periodic Smoke Inspection Program Sections 2180-2194, Title 13, California Code of Regulations**

With amendments effective May 4, 1998

## **Chapter 3.5. Heavy-Duty Diesel Smoke Emission Testing, and Heavy-Duty Vehicle Emission Control System Inspections**

### **§ 2180. Applicability.**

This chapter applies to all diesel-powered and gasoline-powered heavy-duty vehicles, including pre-1974 model-year vehicles, operating in the State of California.

NOTE: Authority Cited: Sections 39600, 39601, 43013, and 44011.6, Health and Safety Code.

Reference: Sections 39002, 39003, 39010, 39033, 43000, 43013, 43018, and 44011.6, Health and Safety Code.

### **§ 2180.1. Definitions.**

- (a) The definitions of this section supplement and are governed by the definitions set forth in Chapter 2 (commencing with section 39010), Part 1, Division 26 of the Health and Safety Code. The following definitions shall govern the provisions of this chapter.
  - (1) “ARB post-repair inspection” means a repeat emission control system inspection, conducted by the Air Resources Board at an Air Resources Board-specified site, for the purpose of clearing a citation.
  - (2) “ARB post-repair test” means a repeat test, conducted by the Air Resources Board at an Air Resources Board-specified site, for the purpose of clearing a citation.
  - (3) “Basic penalty” means the civil penalty of \$500 for a test procedure or emission control system inspection violation that is to be deposited in the Vehicle Inspection and Repair Fund.
  - (4) “Citation” means a legal notice issued by the Air Resources Board to the owner of a heavy-duty vehicle requiring the owner to repair the vehicle and to pay a civil penalty.

- (5) “Defective” means a condition in which an emission control system or an emission control system component is malfunctioning due to age, wear, malmaintenance, or design defects.
- (6) “Demonstration of correction” means the documents identified in section 2186(a) or successful completion of an ARB post-repair test or inspection.
- (7) “Driver” has the same meaning as defined in California Vehicle Code section 305.
- (8) “Emission control label” means the label required by the “California Motor Vehicle Emission Control Label Specifications”, incorporated by reference in 13 CCR, section 1965, or Title 40, Code of Federal Regulations (40 CFR), section 86.085-35 or 40 CFR Part 86, Subpart A.
- (9) “Emission control system” means the pollution control components on an engine at the time its engine family is certified, including, but not limited to, the emission control label.
- (10) “Executive Officer” means the Executive Officer of the Air Resources Board or his or her designee.
- (11) “Fleet” means two (2) or more heavy-duty vehicles.
- (12) “Heavy-duty vehicle” means a motor vehicle having a manufacturer’s maximum gross vehicle weight rating (GVWR) greater than 6,000 pounds, except passenger cars.
- (13) “Inspection procedure” means the test procedure specified in section 2182 and the emission control system inspection specified in section 2183.
- (14) “Inspection site” means an area including a random roadside location, a weigh station, or a fleet facility used for conducting the heavy-duty vehicle test procedure, emission control system inspection, or both.
- (15) “Inspector” means an Air Resources Board employee with the duty of enforcing Health and Safety Code sections 43701(a) and 44011.6, and Title 13, CCR sections 2180 through 2194.
- (16) “Issuance” means the act of mailing or personally delivering a citation to the owner.
- (17) “Minimum penalty” means the \$300 penalty that is to be deposited in the Diesel Emission Reduction Fund pursuant to Health and Safety Code section 44011.6(*l*).

- (18) “Notice of Violation” means a legal notice issued to the owner of a heavy-duty vehicle powered by a pre-1991 model-year diesel engine with a measured smoke opacity exceeding 55 percent but not exceeding 69 percent, requiring the owner to repair the vehicle and submit a demonstration of correction.
- (19) “Officer” means a uniformed member of the Department of the California Highway Patrol.
- (20) “Opacity” means the percentage of light obstructed from passage through an exhaust smoke plume.
- (21) “Owner” means either (A) the person registered as the owner of a vehicle by the California Department of Motor Vehicles (DMV), or its equivalent in another state, province, or country; or (B) a person shown by the registered owner to be legally responsible for the vehicle’s maintenance. The person identified as the owner on the registration document carried on the vehicle at the time a citation is issued shall be deemed the owner unless that person demonstrates that another person is the owner of the vehicle.
- (22) “Removal from service” means the towing and storage of a vehicle under the auspices of the Department of the California Highway Patrol.
- (23) “Repair facility” means any place where heavy-duty vehicles are repaired, rebuilt, reconditioned, or in any way maintained for the public at a charge, and fleet maintenance facilities.
- (24) “SAE J1667” means Society of Automotive Engineers (SAE) Recommended Practice SAE J1667 “Snap-Acceleration Smoke Test Procedure for Heavy-Duty Diesel Powered Vehicles,” as issued February 1996 (“1996-02”), which is incorporated herein by reference.
- (25) “Schoolbus” means the same as defined in California Vehicle Code section 545.
- (26) “Smokemeter” means a detection device used to measure the opacity for smoke in percent opacity.
- (27) “Tampered” means missing, modified, or disconnected.
- (28) “Uncleared citation” means a citation for which demonstration of correction and, if required, payment of any civil penalty, has not been made.

NOTE: Authority Cited: Sections 39600, 39601, 43013, and 44011.6, Health and Safety Code.  
Reference: Sections 39002, 39003, 39010, 39033, 43000, 43013, 43018, and 44011.6, Health and Safety Code. Section 505, Vehicle Code.

**§ 2181. Responsibilities of the Driver and Inspector During the Inspection Procedure.**

- (a) ***Driver of heavy-duty diesel-powered vehicle.*** The driver of a heavy-duty diesel-powered vehicle selected to undergo the inspection procedure shall do all of the following:
  - (1) Drive the vehicle to the inspection site upon direction of an officer.
  - (2) Perform the test procedure upon request by an inspector.
  - (3) Open the vehicle door so that the inspector can observe the driver depress the accelerator pedal.
  - (4) Permit an emission control system inspection upon the request of the inspector.
  - (5) Sign the citation or notice of violation to acknowledge its receipt and the smoke test report to acknowledge performance of the test procedure.
- (b) ***Driver of heavy-duty gasoline-powered vehicle.*** The driver of a heavy-duty gasoline-powered vehicle selected to undergo the inspection shall:
  - (1) Drive the vehicle to the inspection site upon direction of an officer.
  - (2) Permit an emission control system inspection upon request of the inspector.
  - (3) Sign the citation to acknowledge its receipt.
- (c) ***Inspector.*** The inspector in performing the inspection procedure shall do all of the following:
  - (1) Advise the driver that refusal to submit to the inspection procedure is a violation of these regulations.
  - (2) Obtain engine identification information from the vehicle when tested pursuant to section 2182 to determine which opacity standard specified in section 2182 applies.
  - (3) Except as otherwise provided in section 2181(c)(4), issue a copy of the citation to the driver of a vehicle that fails the test procedure or the emission control system inspection.
  - (4) Issue a copy of the notice of violation to the driver of a vehicle powered by a pre-1991 model-year diesel engine with a measured smoke opacity exceeding

55 percent but not exceeding 69 percent, except where a notice of violation or citation has been issued for the vehicle in the preceding 12 months.

- (5) Issue a warning to the owner of a heavy-duty diesel-powered vehicle missing its emission control label that the label must be replaced and the engine number identification must be provided to the ARB within 30 days of written notification by the ARB, or it will be conclusively presumed in any subsequent smoke opacity test where the emission control label remains missing that the vehicle is subject to the 40 percent smoke opacity standard in section 2182(a)(1), unless at the time of the subsequent test it is plainly evident from a visual inspection that the vehicle is powered by a pre-1991 model-year engine.

NOTE: Authority Cited: Sections 39600, 39601, 43013, and 44011.6, Health and Safety Code.

Reference: Sections 39002, 39003, 39010, 39033, 43000, 43013, 43018, and 44011.6, Health and Safety Code. Section 305, Vehicle Code.

## **§ 2182. Heavy-Duty Diesel Vehicle Smoke Opacity Standards and Test Procedures; Excessive Smoke**

### **(a) *Standards***

- (1) No heavy-duty vehicle powered by a 1991 or subsequent model-year diesel engine operating on the highways within the State of California shall exceed 40 percent smoke opacity when tested in accordance with this section unless its engine is exempted under subsection (c) or (d) below.
- (2) No heavy-duty vehicle powered by a pre-1991 model-year diesel engine, operating on the highways within the State of California, shall exceed 55 percent smoke opacity when tested in accordance with this section unless its engine is exempted under subsection (c) or (d) below.

### **(b) *Exemptions***

- (1) The Executive Officer shall exempt from subsections (a)(1) and (2) any engine family that is shown by the engine manufacturer to the satisfaction of the Executive Officer to exhibit smoke opacity greater than 40 percent or 55 percent respectively when in good operating condition and adjusted to the manufacturer's specifications. Such engine family(s) must comply with any technologically appropriate less stringent opacity standard identified by the Executive Officer based on a review of the data obtained from engines in good operating condition and adjusted to manufacturer's specifications.
- (2) The Executive Officer shall exempt from subsections (a)(1) and (2) any 1991 and earlier model-year heavy-duty diesel engines that are equipped with

carryover add-on aftermarket turbocharger kits approved by the ARB, and are shown by the kit or engine manufacturer to the satisfaction of the Executive Officer to exhibit smoke opacity greater than 40 percent or 55 percent respectively when in good operating condition and adjusted to the manufacturer's specifications. Such engines must comply with any technologically appropriate less stringent opacity standard identified by the Executive Officer based on a review of the data obtained from engines in good operating condition and adjusted to manufacturer's specifications.

- (3) Exemptions previously issued and in effect on January 1, 1996 shall remain in effect under the amendments to this section adopted on March 2, 1998 and effective on May 4, 1998.
- (4) A manufacturer seeking an exemption under subsection (b) shall provide the ARB with the engine emissions data needed to exempt the engine family and determine technologically appropriate less stringent opacity standards.
- (c) ***Effect of missing emission control label on applicable standard.*** When the owner of a heavy-duty diesel-powered vehicle receives written notification from the ARB that the emission control label was missing during an inspection, the owner must replace the emission control label and provide the engine number identification to the ARB within 30 days of receipt of the notification. If the owner fails to comply with this requirement, it will be conclusively presumed in any subsequent smoke opacity test where the emission control label remains missing that the vehicle is subject to the 40 percent smoke opacity standard in section 2182(a)(1), unless at the time of the subsequent test it is plainly evident from a visual inspection that the vehicle is powered by a pre-1991 model-year engine.
- (d) ***Excessive smoke.*** A heavy-duty vehicle has excessive smoke if it fails to comply with the smoke opacity standard applicable under this section 2182.
- (e) ***Test Procedures.*** For purposes of this chapter 3.5, smoke opacity shall be determined in accordance with SAE J1667.

NOTE: Authority Cited: Sections 39600, 39601, 43013, and 44011.6, Health and Safety Code.  
Reference: Sections 39002, 39003, 39010, 39033, 43000, 43013, 43018, and 44011.6, Health and Safety Code.

## **§ 2183. Inspection of the Emission Control System on a Heavy-Duty Vehicle**

- (a) ***Heavy-duty diesel-powered vehicles.*** The heavy-duty diesel-powered vehicle emission control components subject to inspection for tampered or defective conditions include, but are not limited to, the following:

- (1) The engine governor.
  - (2) Any seals and/or covers protecting the air-fuel ratio adjustments.
  - (3) Any fuel injection pump seal and covers.
  - (4) The air cleaner and flow restriction indicator.
  - (5) The exhaust gas recirculation valve.
  - (6) The particulate matter trap system or catalytic converter system, including pipes and valves.
  - (7) Related hoses, connectors, brackets, and hardware for these components.
  - (8) Engine computer controls, related sensors, and actuators.
  - (9) Emission control label.
  - (10) Any other emissions-related components for a particular vehicle/engine as determined from the manufacturer's specifications, emission control label, certification data, or published vehicle parts manuals.
- (b) ***Heavy-duty gasoline-powered vehicles.*** The heavy-duty gasoline-powered vehicle emission control components subject to inspection for tampered or defective conditions, include, but are not limited to, the following:
- (1) The air injection system.
  - (2) The positive crankcase ventilation system.
  - (3) The exhaust gas recirculation system.
  - (4) The catalytic converter, including pipes and valves.
  - (5) The evaporative emission control system.
  - (6) Related hoses, connectors, brackets, and hardware for these components.
  - (7) Engine computer controls, related sensors, and actuators.
  - (8) On-Board Diagnostic (OBD) systems for 1994 and subsequent model year vehicles, if so equipped.
  - (9) Emission control label.

- (10) Any other emissions-related component for a particular vehicle/engine as determined from the manufacturer's specifications, emission control label, certification data, or published vehicle parts manuals.

NOTE: Authority Cited: Sections 39600, 39601, 43013, and 44011.6, Health and Safety Code.  
Reference: Sections 39002, 39003, 39010, 39033, 43000, 43013, 43018, and 44011.6, Health and Safety Code.

#### **§ 2184. Refusal to Submit to Inspection Procedure.**

The refusal by an owner or driver of a vehicle to submit to the test procedure in section 2182 or to the emission control system inspection in section 2183 constitutes a failure of the test procedure or inspection, unless the driver is cited by the California Highway Patrol for a violation of California Vehicle Code section 2813.

NOTE: Authority Cited: Sections 39600, 39601, 43013, and 44011.6, Health and Safety Code.  
Reference: Sections 39002, 39003, 39010, 39033, 43000, 43013, 43018, and 44011.6, Health and Safety Code. Sections 305, 505, and 2813, Vehicle Code.

#### **§ 2185. Civil Penalty Schedule.**

- (a) The owner of a heavy-duty vehicle that fails the test procedure or the emission controls system inspection, including by refusal to submit, is subject to the following penalty schedule:
  - (1) The owner of a vehicle, other than a schoolbus, that is cited for the first time pursuant to section 2182 or 2183 and for which demonstration of correction is provided and payment is made within 45 days from personal or certified mail receipt of the citation, shall pay the minimum penalty of \$300.
  - (2) The owner of a vehicle that is cited for the first time pursuant to section 2184, or that is cited for the first time pursuant to sections 2182 or 2183 and for which demonstration of correction is not provided within 45 days from personal mail or certified mail receipt of the citation, shall provide demonstration of correction and pay the minimum penalty of \$300 and the basic penalty of \$500 for a total of \$800. Schoolbuses are exempt from the \$300 minimum penalty for the first violation only.
  - (3) The owner of a vehicle that is cited within 12 months from the issuance of the most recent citation for that vehicle shall within 45 days from personal or certified mail receipt of the current citation provide demonstration of correction and pay the penalty of \$1,500 and the minimum penalty of \$300 for a total of \$1,800.



- (b) (1) No citation shall be issued to the owner of a heavy-duty vehicle powered by a pre-1991 model-year diesel engine on the basis of a measured smoke opacity exceeding 55 percent but not exceeding 69 percent, unless:
    - (A) the owner fails to provide a demonstration of correction within 45 days from personal or certified mail receipt of the notice of violation, or
    - (B) a notice of violation or citation has been issued for the vehicle in the preceding 12 months.
  - (2) The owner of a vehicle that is the subject of a notice of violation and for which demonstration of correction is provided within 45 days from personal or certified mail receipt of the notice of violation shall not be subject to a penalty for the violation.
  - (3) The owner of a vehicle that is initially subject to a notice of violation, but is cited after a demonstration of correction is not provided within 45 days from personal or certified mail receipt of a notice of violation, shall be subject to the penalty in section 2185(a)(2).
  - (4) (A) Where a heavy-duty vehicle with a pre-1991 engine inspected in accordance with section 2181 has a measured opacity exceeding 55 percent but not exceeding 69 percent within 12 months of issuance of a notice of violation for which a demonstration of correction was timely provided within the applicable 45-day period, a citation shall be issued and the owner shall be subject to the penalty in section 2185(a)(2).
  - (B) Where a heavy-duty vehicle with a pre-1991 engine inspected in accordance with section 2181 has a measured opacity exceeding 55 percent but not exceeding 69 percent within 12 months of issuance of a notice of violation for which a demonstration of correction was not timely provided within the applicable 45-day period, a citation shall be issued and the owner shall be subject to the penalty in section 2185(a)(3).
- (c) If a vehicle fails the test procedure or an emission control system inspection one year or more after the date of its most recent failure, the owner of that vehicle shall be subject to the penalty schedule in section 2185(a)(1) and (2).
  - (d) When a vehicle is cited after a bona fide change of ownership between non-related persons or entities, the new owner shall be subject to the penalty schedule in section 2185(a)(1) and (2) if the only citations issued for the vehicle within the previous 12 months were issued prior to the change of ownership to the new owner.

- (e) An owner who has been cited twice or more for tampered emission controls on the same vehicle shall be subject to the penalty in section 2185(a)(3), notwithstanding section 2185(c).

NOTE: Authority Cited: Sections 39600, 39601, 43013, and 44011.6, Health and Safety Code.  
Reference: Sections 39002, 39003, 39010, 39033, 43000, 43013, 43018, and 44011.6, Health and Safety Code. Sections 305, 505, and 545, Vehicle Code.

## **§ 2186. Demonstration of Correction and Post-Repair Test or Inspection.**

- (a) The owner may demonstrate correction of the vehicle by submitting to the Air Resources Board the following documents:
  - (1) Where repairs are made at a repair facility, a repair receipt or a completed work order which contains the following information:
    - (A) Name, address, and phone number of the facility;
    - (B) Name of mechanic;
    - (C) Date of the repair;
    - (D) Description of component replacement(s), repair(s), and/or adjustment(s); and
    - (E) Itemized list of replaced component(s), including description of part, part number, and cost.
  - (2) Where the owner makes his or her own repairs outside of a repair facility,
    - (A) An itemized receipt for the parts used in the repair, and
    - (B) A statement identifying the date and nature of the repairs made.
  - (3) Where the citation or notice of violation was based on a failure to meet the opacity standard applicable under section 2182, a smoke test report from a subsequent test showing that the repaired vehicle passed the applicable section 2182 standard along with a statement to that effect made under penalty of perjury by the person who conducted the subsequent test.
  - (4) Where the citation was based on a failure to pass an emission control system inspection as specified in section 2183, a statement by a person, under penalty of perjury, that the person has reinspected any components identified in the citation as defective or tampered and has determined that these components are in good working order.

- (b) In lieu of submitting the documents identified under section 2186(a), the owner may demonstrate correction of the vehicle by submitting it to an ARB post-repair test or an ARB post-repair inspection.
- (c) The Air Resources Board shall require an ARB post-repair test or an ARB post-repair inspection whenever:
  - (1) a submitted repair receipt or work order does not comply with (a) above;
  - (2) a repair receipt or work order appears to be falsified; or
  - (3) a second and subsequent failures of the test procedure or an emission control system inspection on the vehicle occur within a one-year period.

NOTE: Authority Cited: Sections 39600, 39601, 43013, 44011.6, Health and Safety Code.  
Reference: Sections 39002, 39003, 39010, 39033, 43000, 43013, 43018, and 44011.6, Health and Safety Code. Section 505, Vehicle Code.

#### **§ 2187. Vehicles Removed from Service.**

- (a) Vehicles are subject to removal from service by the Department of the California Highway Patrol if requested by the Air Resources Board inspector, and if one or more uncleared citations exist at the time of inspection.
- (b) Upon payment by cashier's check or money order of all unpaid penalties for a vehicle that has been removed from service, the Air Resources Board shall provide the owner, or designee, a release form for presentation to the Department of the California Highway Patrol.
- (c) The release of the vehicle shall be subject to the condition that it be repaired and post-repair tested or inspected within 15 days.

NOTE: Authority Cited: Sections 39600, 39601, 43013, 44011.6, Health and Safety Code.  
Reference: Sections 39002, 39003, 39010, 39033, 43000, 43013, 43018, and 44011.6, Health and Safety Code.

#### **§ 2188. Contesting a Citation.**

The owner of a vehicle cited under these regulations may request a hearing pursuant to sections 60075.1 et seq., Title 17, California Code of Regulations.

NOTE: Authority Cited: Sections 39600, 39601, 43013, 44011.6, Health and Safety Code.  
Reference: Sections 39002, 39003, 39010, 39033, 43000, 43013, 43018, and 44011.6, Health and Safety Code.



## **Chapter 3.6. Periodic Smoke Inspections of Heavy-Duty Diesel-Powered Vehicles**

### **§ 2190. Vehicles Subject to the Periodic Smoke Inspection Requirements**

These regulations shall be applicable, operative July 1, 1998, as follows:

- (a) Except as provided in subsections (b), (c), (d), (e) and (f), the requirements of this chapter apply to all heavy-duty diesel-powered vehicles with gross vehicle weight ratings of greater than 6,000 pounds which operate on the streets or highways within the State of California.
- (b) Heavy-duty diesel-powered vehicles which are not part of a fleet or are employed exclusively for personal use are excluded from the requirements of this chapter.
- (c) Heavy-duty diesel-powered vehicles which are registered under the International Registration Plan as authorized by Article 4 (commencing with section 8050), Chapter 4, Division 3 of the Vehicle Code and which have established a base state other than California (non-California based vehicles) are excluded from the requirements of this chapter.
- (d) Heavy-duty diesel-powered vehicles which operate in California under the terms of Interstate Reciprocity Agreements as authorized by Article 3 (commencing with section 8000), Chapter 4, Division 3 of the Vehicle Code and which belong to fleets that are not based in California are excluded from the requirements of this chapter.
- (e) Heavy-duty diesel-powered vehicles operating in California under the terms of any other apportioned registration, reciprocity, or bilateral prorate registration agreement between California and other jurisdictions and which belong to fleets that are not based in California are excluded from the requirements of this chapter.
- (f) Heavy-duty diesel-powered vehicles operating in California under short-term vehicle registrations or permits of 90 days or less (including but not limited to 90-day temporary registrations and 4-day permits under Vehicle Code section 4004) are excluded from the requirements of this chapter.

NOTE: Authority Cited: Sections 39600, 39601, and 43701(a), Health and Safety Code. Reference: Sections 39002, 39003, 39010, 39033, 43000, 43018, 43701(a), and 44011.6, Health and Safety Code.

## **§ 2191. Definitions.**

- (a) The definitions of this section supplement and are governed by the definitions set forth in Chapter 2 (commencing with Section 39010), Part 1, Division 26 of the Health and Safety Code. The provisions of this chapter shall also be governed by the definitions set forth in section 2180.1, Title 13, California Code Regulations including the following modifications:
  - (1) “Fleet” means any group of 2 or more heavy-duty diesel-powered vehicles which are owned or operated by the same agency or entity.
  - (2) “Test opacity” means the opacity of smoke from a vehicle when measured in accordance section 2193(e).

NOTE: Authority Cited: Sections 39600, 39601, and 43701(a), Health and Safety Code. Reference: Sections 39002, 39003, 39010, 39033, 43000, 43018, 43701(a), and 44011.6, Health and Safety Code.

## **§ 2192. Vehicle Inspection Responsibilities.**

- (a) The owner of a heavy-duty diesel-powered vehicle subject to the requirements of this chapter shall do all of the following:
  - (1) Test the vehicle for excessive smoke emissions periodically according to the inspection intervals specified in section 2193(a), (b), and (c).
  - (2) Measure the smoke emissions for each test using the test procedure specified in section 2193(e).
  - (3) Record the smoke test opacity levels and other required test information as specified in section 2194.
  - (4) Have the vehicle repaired if it exceeds the applicable smoke opacity standard specified in section 2193(e).
  - (5) Record the vehicle repair information as specified in section 2194.
  - (6) Conduct a post-repair smoke test to determine if the vehicle complies with the applicable smoke opacity standard.
  - (7) Record the post-repair smoke test results as specified in section 2194.

- (8) If the vehicle does not comply with the applicable smoke opacity standard after the test required by section 2192(a)(7), make additional repairs to achieve compliance, and record the smoke test results as specified in section 2194.
- (9) Keep the records specified in section 2194 for two years after the date of inspection.
- (10) Permit an Air Resources Board inspector to review the inspection records specified in section 2194 at owner/operator designated fleet locations by appointment.

NOTE: Authority Cited. Sections 39600, 39601, and 43701(a), Health and Safety Code. Reference: Sections 39002, 39003, 39033, 43000, 43016, 43018, 43701(a), and 44011.6, Health and Safety Code.

### **§ 2193. Smoke Opacity Inspection Intervals, Standards, and Test Procedures.**

- (a) ***Initial phase-in.*** Vehicles which are subject to the requirements of this chapter on the operative date of these regulations shall be tested for smoke opacity (and repaired if the applicable smoke opacity standard is exceeded) in accordance with the requirements of section 2192 pursuant to the applicable following schedule:
  - (1) Fleets of five or more vehicles subject to this chapter:
    - (A) At least 25 percent of the fleet's vehicles within 180 calendar days of the effective date of these regulations;
    - (B) At least 50 percent of the fleet's vehicles within 270 calendar days of the effective date of these regulations;
    - (C) At least 75 percent of the fleet's vehicles within 365 calendar days of the effective date of these regulations; and ;
    - (D) The fleet's remaining vehicles no later than 455 calendar days after the effective date of these regulations.
  - (2) For fleets of 2 to 4 vehicles, at least one vehicle must be tested in the initial 180 day period, and in each subsequent 90 calendar day period, until all vehicles in the fleet have been tested.
- (b) ***New fleets.*** Fleets which first become subject to the requirements of this chapter subsequent to the effective date of these regulations must be tested in accordance with section 2192 within the applicable time intervals reflected in subsection (a) above, beginning on the date the fleet becomes subject to these regulations.

- (c) ***Annual testing.*** Once a vehicle subject to the requirements of this chapter has been tested in accordance with subsection (a) or (b), or has been acquired by a fleet owner after the effective date of these regulations, the vehicle must periodically be tested for smoke opacity (and repaired if the applicable smoke opacity standard is exceeded) in accordance with the requirements of section 2192 within 12 months of the previous test conducted under this section 2193.
- (d) ***Exemption for vehicles powered by 1994 or subsequent model-year engines.*** Any heavy-duty vehicle powered by a 1994 or subsequent model-year engine is exempt from the testing requirements of this section until January 1 of the calendar year that is four years after the model year of the engine, and is to be treated as having been acquired by the owner on that January 1. For example, a 1995 model-year engine will be exempt until January 1, 1999.
- (e) ***Smoke opacity standards and test procedures.***
  - (1) Except as otherwise provided in subsection (e)(2) below, the smoke opacity standards and test procedures are those specified in section 2182, Title 13, California Code of Regulations.
  - (2) Prior to July 1, 1999, if a repair facility is not equipped with an operable SAE J1667 smoke meter, vehicles may be tested at the repair facility in accordance with the smoke opacity test procedures and opacity standards set forth in section (e)(3). These are the test procedures and opacity standards originally established for the heavy-duty diesel vehicle roadside inspection program in 1991.
  - (3) ***Optional smoke opacity test procedures and standards prior to July 1, 1999.***
    - (A) ***Standards.***
      - 1. The maximum smoke opacity standard for a 1991 or subsequent model-year heavy-duty diesel-powered vehicle with a Federal peak smoke engine certification level of 35 percent peak opacity or less is 40 percent when tested in accordance with section 2193(e)(3)(B) and (C).
      - 2. The maximum smoke opacity standard for any other heavy-duty diesel-powered vehicle is 55 percent when tested in accordance with section 2193(e)(3)(B) and (C).
      - 3. The above standards do not apply to an engine exempted under section 2182(b).



- (B) **Equipment.** The smoke opacity measurement equipment shall consist of a light extinction type smokemeter which includes an optical detection unit, a control/indicator unit, and a strip chart recorder.
1. The smokemeter shall comply with the specifications provided in the Society of Automotive Engineers (SAE) procedure J1243, "Diesel Emission Production Audit Test Procedure," May 1988, which is incorporated herein by reference, section 7.4 and shall be calibrated according to specifications in SAE procedure J1243, section 8.2.
  2. The strip chart recorder shall comply with specifications in SAE procedure J1243, section 7.5, subsections 1-4 (May 1988).
- (C) **Procedure.** The test procedure shall consist of preparation, preconditioning, and test phases:
1. In the preparation phase, the vehicle shall be placed at rest, the transmission shall be placed in neutral, and the vehicle wheels shall be properly restrained to prevent any rolling motion.
  2. In the preconditioning phase, the vehicle shall be put through a snap-idle cycle two or more times until two successive measured smoke levels are within ten (10) opacity percent of each other. The smokemeter shall be rechecked prior to the preconditioning sequence to determine that its zero and span setting are adjusted according to specifications in SAE procedure J1243, section 8.1 (May 1988).
  3. In the test procedure phase, the vehicle shall be put through the snap-idle cycle three times.
  4. The opacity shall be measured during the preconditioning and test phases with a smokemeter and shall be recorded continuously on the chart recorder during each snap-idle cycle. The maximum instantaneous value recorded by the chart recorder shall be the opacity reading.
  5. The test opacity to determine the compliance with (A)1. and (A)2. above shall be the average of the two meter readings with the least difference in opacity values. If all three readings have successive equivalent differences between them, the test opacity shall be the average of the three readings.

NOTE: Authority Cited: Sections 39600, 39601, 43013, 43701(a), Health and Safety Code. Reference: Sections 39002, 39003, 39033, 43000, 43013, 43018, 43701(a), and 44011.6, Health and Safety Code.

#### **§ 2194. Record Keeping Requirements.**

- (a) The owner of a vehicle subject to the requirements of this chapter shall record the following information when performing the smoke opacity testing:
  - (1) The brand name and model of the opacity meter.
  - (2) The brand name and model of the strip chart recorder, if an SAE J1243 type smoke meter is employed.
  - (3) The dates of last calibration of the opacity meter and chart recorder.
  - (4) The name of the smoke meter operator who conducted the test.
  - (5) The name and address of the contracted smoke test facility or vehicle repair facility that conducted the test (if applicable).
  - (6) The applicable smoke opacity standard for the tested vehicle.
  - (7) Vehicle identification number, vehicle's engine year, engine make, and engine model, and test date. Fleet-designated vehicle identification numbers are also acceptable.
  - (8) The initial smoke test opacity levels (for three successive test readings).
  - (9) An indication of whether the vehicle passed or failed the initial smoke test.
  - (10) The post-repair test date.
  - (11) The post-repair smoke test opacity levels (for three successive test readings).
  - (12) An indication of whether the vehicle passed or failed the post-repair smoke test.
  - (13) For vehicles that have failed the smoke test and have been repaired, the vehicle repair information specified in section 2186(a), Title 13, California Code of Regulations.

NOTE: Authority Cited: Sections 39600, 39601, and 43701(a), Health and Safety Code. Reference: Sections 39002, 39003, 39033, 43000, 43018, 43701(a), and 44011.6, Health and Safety Code.